

CLAIMS

We claim:

1. A method for detection of multiple positioning signals, comprising:
detecting a first positioning signal using non-coherent integration;
5 based on the first positional signal, determining the values of one or more signal detection parameters;
using the values of the signal detection parameters, detecting a second positioning signal using coherent integration.
- 10 2. A method as in Claim 1, wherein determining the values of one or more signal detection parameters includes aligning the first positioning signal relative to a navigation message embedded in the first positioning signal.
3. A method as in Claim 1, wherein determining the values of one or more signal detection parameters includes determining an oscillator frequency.
- 15 4. A method as in Claim 1, wherein determining the values of one or more signal detection parameters include determining an oscillator phase acceleration.
5. A method as in Claim 1, wherein the non-coherent integration is performed by operating on correlation values computed based on predetermined size blocks of a received signal.
- 20 6. A method as in Claim 5, further comprising combining the correlation values into a single value.
7. A method as in Claim 1, wherein determining the values of one or more signal detection parameters is carried out in the frequency domain.
- 25 8. A method as in Claim 1, further comprising, prior to the coherent integration, removing the effect of a navigation message.
9. A method as in Claim 8, wherein the removing comprising doubling an estimated phase angle.

10. A method as in Claim 1 further comprising recovering a time stamp from the first positioning signal.